

11.2.1 IBM's Technical Assumptions & Explanations

1. General

- a. The Commonwealth will provide Microsoft Software Licenses required for the solution, for the Desktop, Messaging and Server environments.
- b. To the extent the Commonwealth's existing equipment is no longer supported by commercially available maintenance contracts (e.g., too outdated), IBM will use commercially reasonable efforts to support such equipment until refresh and be relieved of SLAs to the extent affected. We believe this is particularly applicable to the Desktop and Server environment and to some extent the Network environment.
- c. IBM assumes that the Commonwealth will refresh on the stated frequency in all 3 pricing scenarios.

2. Mainframe

- a. The CS7802 is the latest in the Unisys architecture and it will be replaced by the Commonwealth with a comparable machine. The Unisys refresh is not included in the price. .
- b. During due diligence, we discovered that there is a small (5 MIPS) VM System in RPB that is not included in the Commonwealth's bid request or Baselines. We would like to discuss with the Commonwealth what solution it is currently implementing. Services for this platform are not included in the price.
- c. IBM will replace four (4) BMC products with lower cost IBM products (Secondary Index Feature Add-On, Secondary Index Utility, UltraOpt/IMS and UltraOpt/CICS with IMS Index Builder (for both Secondary Index products), IMS Network Compression Facility and CICS Online Transaction Optimizer for zOS, respectively).
- d. VITA will allow a sufficient downtime change window for mainframe processing during cutover to the new data center. VITA will continue to permit the infrastructure maintenance windows it is currently using today.
- e. At the time of the move to the new data center, the IBM CPU will be replaced with z990 technology. The selection of the z990, the latest IBM architecture, mitigates the risk that the older z900 models (includes the current 1C6) will reach "end of support" prior to 2012. No further refreshes are planned.
- f. Upon workload migration to the new data center, we intend to consolidate and refresh the DASD associated with the IBM processor to IBM DS8000 devices, these devices will subsequently be refreshed again in Contract Year 6. The EMC devices supporting the Unisys processor will be refreshed upon workload migration to the new data center and again in Contract Year 5.
- g. The IBM VTS and STK Powderhorn will be refreshed upon workload migration to the new data center. Due to the age of the technology and the agencies media dependencies, other older drives (3480, 3490, 3820) that are required for agency processing will be supported through maintenance only.
- h. All other peripherals (e.g., ESCON, cables) are not planned to be refreshed after the initial move to the new data center.

3. Disaster Recovery

VITA will retain the SunGard contracts and extend coverage until the move into the new data center is complete, if needed. IBM will perform Disaster Recovery duties as defined in the SunGard contracts that are in effect at Service Commencement.

4. Help Desk

The incident baseline is 83,667 per month. We believe that our solution and industry standard practices (HelpNow!, electronic software distribution, etc) will drive a reduction in the number of incidents per end user.

5. Server

- a. IBM's solution includes the physical consolidation of the Commonwealth Servers and the elimination of images, from 3300 boxes/images to 2300 images/925 boxes is consolidating the Servers.
- b. The Commonwealth will retain responsibility for the application acceptance testing associated with the server centralization and consolidation.
- c. The Richmond Plaza Building data center has approximately 5,000 square feet of available floor space and facilities to accommodate additional servers to be installed during the initial server consolidation project.
- d. IBM is providing physical DBA support. We would like to gain a better understanding of the Commonwealth's DBA support today.
- e. Middleware support is provided at a time and material rate.
- f. UNIX machines will be refreshed with like-for-like hardware platforms. For Intel servers, IBM xSeries Intel platforms will be used.
- g. IBM will standardize on IBM's TotalStorage suite of storage products. For fast access disk, the solution is SAN technology. For all other disk, we will leverage NAS technology. The SAN/NAS environment consists of Three (3) Fast-T 8100 and Ten (10) Fast-T DS4300 devices. Tape drives supporting the SAN environment will be refreshed in Contract Year 1 and again in Contract Year 4.

6. Desktop Services

6.1 General

- a. We plan to standardize and consolidate images and software distribution to the extent agreeable. Software distributions will be consolidated into core and non-core images. We anticipate approximately 100 packages and distributions per year. To the extent electronic software distribution is not feasible because of the network connections (i.e., prisons), we will perform with local support. To the extent a targeted distribution is required for new custom applications, or beyond the agreed upon core and non-core, this support will be provided on a per project basis.
- b. The Parties will need to agree upon appropriate facility space (floor space, desk, network, and phone) at the Commonwealth locations for on-site PC support staff.

6.2 Desktop, Laptops, Tablet PCs

- a. IBM assumed a refresh ratio of 4 low end to 1 high end Desktop Configuration: High End -- Dell GX280 80GB Drive / 512MB RAM / 3.0GHz processor with 17" flat panel monitor. Low End -- Dell GX280 40GB Drive / 256MB RAM / 2.53GHz processor with 17" flat panel monitor.
- b. Laptops Configuration. IBM assumed a refresh of 3 low to 1 high end Laptop, purchased with a 3 year enhanced/on site maintenance/warranty matching the refresh period. High End -- Dell D810 with 40GB Drive/ 512 RAM / 1.86GHz processor. Low End -- Dell D610 with 40GB Drive/ 512 RAM / 1.6GHz processor
- c. Tablet PCs. Fujitsu Stylistic ST 5020
- d. IBM's solution assumes 979 MACs per month for Desktops, Laptops, Tablet PCs, and Network Printers. There are no MACs for Desktop Printers or Handhelds.

- e. Installs for all new End User Devices are included in the Annual Fees. No other Installs are included.

6.3 Network Printers

- a. IBM is assuming a 10% reduction in the Printers over the life of the contract, after the 1st year, by reducing the ratio of Printers to end users. Printers will be refreshed with IP addressable devices to reduce the amount of network traffic and dependency on print servers. Although Network Printers are not in the Baseline, IBM assumes this is an oversight and will be added.
- b. Network printers, network copiers, and network multifunction devices will be refreshed in accordance with the schedule set forth in the document, "Schedule 3.11 to the Comprehensive Infrastructure Agreement Technology Refresh Plan".
- c. For the black and white network printers, we will offer two models of HP printer. For the Network color printer, we will offer the HP 4610N color laser printer; the network copier will be the Xerox WorkCentre 2424 dn. For the Network multifunction devices, we will offer the Canon ImageClass C3500

6.4 Desktop Printers, Handheld Devices

IBM assumes the Commonwealth will purchase desktop printers and handhelds on an as-needed basis with 90 days for all except for the high end desktop printers with a 1 year warranty. There is no refresh of Desktop Printers or handheld devices in the price.

7. Messaging

- a. IBM's proposal assumes 50% of the End Users will obtain Bronze support, and 50% Silver support.
- b. VITA will define naming conventions for all attributes in the central directory to support all in-scope users. This includes user logon ids, display name, location, department, etc.
- c. The Commonwealth will retain support for legacy applications with highly coupled messaging interfaces. Such as Lotus Notes applications.
- d. VITA Active Directory and Exchange 2003 architecture is stable and sufficient for the migration.
- e. SMTP and LDAP are the only application interfaces.
- f. To provide the Commonwealth greater savings and efficiency, we have assumed that 4 agencies will migrate, concurrently, over a 2 year period.
- g. If any mail is encrypted, the End Users will decrypt the mail before migration.
- h. As the entire population will not utilize the Archival Compliance and Discovery services, Real Time Collaboration Services, and wireless, we chose to include it on a per user basis for those who require it.
- i. Migration of messaging within the Bronze Model will provide users with procedures to archive legacy data

8. Network

- a. IBM's solution assumes that the Commonwealth's environment can be optimized by reducing / consolidating / eliminating Network devices over time. Our current solution assumes a reduction of approximately 8% of the devices over a 7 year period. We may be able to achieve a greater optimization, but would like to work with the Commonwealth to understand if it is feasible.
- b. IBM's approach for distributed data network routers and hubs will be in five phases. During each phase, approximately 20% of the hardware will be replaced each year. Older equipment will be scheduled first. We anticipate the first phase to begin in 2006 / 2007, and the refresh cycle will continue for 5 years. One refresh of the devices will be performed during the contract term.

- c. All SNMP capable devices will be proactively monitored and managed on a 24 x 7 x 365 basis. Non SNMP capable devices will continue to be monitored on a trouble ticket basis.
- d. The Network Operations Center (NOC) will be dedicated and staffed 7x24x365 at the new data center facility.

9. Chargeback

Chargeback data collection applies to the application, database, print / file, and messaging servers. We have not included chargeback data collection from the infrastructure support servers (back up and domain name Servers), since no identifiable agency utilization data resides on those servers, but would be glad to discuss an allocation methodology to apportion the costs.